

IN THE CLAIMS:

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1. (original) A method for maintaining a data warehouse, comprising:  
identifying a data source of interest;  
updating a metadata to reflect information available from said source;  
automatically generating a mediator based on said metadata; and  
writing a wrapper for said source which calls said mediator.

2. (original) The method of claim 1, wherein the step of updating a  
metadata comprises entering new types of information, new data formats for  
previously defined information, new transformations between data formats, and  
the schema of said source.

3. (original) The method of claim 1, wherein said mediator is fully  
functional and is automatically generated by a stand-alone mediator generation  
program.

4. (original) The method of claim 3, wherein said mediator generation  
program automatically defines an API and translation libraries

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5. (original) The method of claim 4, wherein said mediator comprises code to translate between source and target representations, possibly using externally defined methods, and load data into said warehouse.

6. (original) The method of claim 1, wherein said wrapper makes use of said mediator.

7. (original) The method of claim 3, wherein said mediator generation program defines a public data representation, wherein said wrapper uses said public data representation.

8. (original) The method of claim 3, wherein said wrapper uses said mediator to load data into said warehouse.

9. (original) A DataFoundry metadata model comprising abstractions, translations, mappings and database descriptions.

10. (original) The model of claim 9, comprising a UML DataFoundry metadata representation.

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11. (original) The model of claim 9, wherein said model defines metadata used by a mediator generation program, wherein said mediator generation program generates a mediator.

12. (previously amended) The model of claim 11, wherein said mediator generation program comprises:

reading said metadata;  
generating translation libraries;  
generating an API; and  
generating said mediator.

13. (previously amended) The model of claim 12, wherein the step of reading said metadata comprises reading the abstraction metadata; reading the translation metadata; reading the database description metadata; and reading the mapping metadata.

14. (previously amended) The model of claim 12, wherein the step of generating translation libraries comprises developing public and private class definitions and implementations of data structures.

15. (previously amended) The model of claim 14, wherein said data structures comprise said abstractions and said translations.

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16. (previously amended) The model of claim 12, wherein generating the mediator consists of creating public and private definitions and implementations of a class or classes capable of receiving data in one format, converting it to another format, and loading it into a data warehouse.

17. (previously amended) The model of claim 16, wherein said data is received by a receiving data structure defined within said translation library and said data is loaded into a warehouse whose schema corresponds to the database description component of the metadata.

18. (original) The method of claim 1, wherein said method is applied to data warehousing applications in the domain of protein sequence and structure analysis.

19. (original) The method of claim 1, wherein said method is applied to data warehousing applications in the domain of functional genomics and proteomics.

20. (original) The method of claim 1, wherein said method is used for integrating a new data source into a data warehouse.

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21. (original) The method of claim 1, wherein said method is used for updating a warehouse when a previously integrated data source is modified.

22. (original) The model of claim 9, as defined by the UML DataFoundry representation.

23. (original) The method of claim 14, wherein said data structures correspond to said abstractions and said translations.

24. (original) A computer-useable medium embodying computer program code for maintaining a data warehouse by executing the steps of:

- identifying a data source of interest;
- updating a metadata to reflect information available from said source;
- automatically generating a mediator based on said metadata; and
- writing a wrapper for said source which calls said mediator.

25. (original) The computer-useable medium of claim 24, wherein the step of updating a metadata comprises entering new types of information, new data formats for previously defined information, new transformations between data formats, and the schema of said source.

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26. (original) The computer-useable medium of claim 24, wherein said mediator is fully functional and is automatically generated by a stand-alone mediator generation program.

27. (original) The computer-useable medium of claim 24, wherein said mediator generation program automatically defines an API and translation libraries

28. (original) The computer-useable medium of claim 27, wherein said mediator comprises code to translate between source and target representations, possibly using externally defined methods, and load data into said warehouse.

29. (original) The computer-useable medium of claim 24, wherein said wrapper makes use of said mediator.

30. (original) The computer-useable medium of claim 26, wherein said mediator generation program defines a public data representation, wherein said wrapper uses said public data representation.

31. (original) The computer-useable medium of claim 26, wherein said wrapper uses said mediator to load data into said warehouse.

32-40 (cancelled)

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41. (previously amended) The computer-usable medium of claim 24, wherein said method is applied to data warehousing applications in the domain of protein sequence and structure analysis.

42. (previously amended) The computer-usable medium of claim 24, wherein said method is applied to data warehousing applications in the domain of functional genomics and proteomics.

43. (previously amended) The computer-usable medium of claim 24, wherein said method is used for integrating a new data source into a data warehouse.

44. (previously amended) The computer-usable medium of claim 24, wherein said method is used for updating a warehouse when a previously integrated data source is modified.

45, 46 (cancelled)

47. (previously amended) An apparatus for maintaining a data warehouse, comprising:

means for identifying a data source of interest;

means for updating a metadata to reflect information available from  
said source;

means for automatically generating a mediator based on said  
metadata; and

means for writing a wrapper for said source which calls said mediator.

48. (previously amended) The method of claim 1, wherein said method  
is applied to data warehousing applications in the domain of astrophysics and  
climate modeling.

49. (previously amended) The method of claim 1, wherein said method  
is applied to data warehousing applications in the domain of medical image  
processing and analysis.

50. (previously amended) The method of claim 1, wherein said method  
is applied to data warehousing applications in the domain of tracking consumer  
and customer preferences.

51. (previously amended) The method of claim 1, wherein said method  
is applied to data warehousing applications in the domain of satellite and  
terrestrial communication systems analysis.



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52. (previously amended) The method of claim 1, wherein said method is used for integrating a new data source into a data warehouse.

53. (previously amended) The method of claim 1, wherein said method is used for updating a warehouse when a previously integrated data source is modified.

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